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Maritime clusters formulate appealing objects of study, for many viewpoints. At the same time, the theory is not homogenous nor compartmentalized, although some main themes do seem to be prevalent. The latter include innovation, competitiveness, strategy, and policy. Through an inclusive analysis of the literature, data mining is attempted within this body of knowledge. A dominant instance within the literature is the existence of a strategic case, along with the fact that this is rooted within a recurring constellation of topics vested within strategic management. These occurrences are categorized per generic premise, according to a coding protocol. The data is then adjusted into dichotomous variables, to investigate dependent samples' correlation. The aim of this methodology is to examine association between the categorical variables of academic impact and the presence of a strategic case. The results of the analysis are statistically significant. This research can provoke novel directions with respect to strategic and tactical decision making, for academia and practice. In addition, this work provides a rudimentary inventory of the literature of maritime clusters, that can aid the formulation and investigation of further statistical hypotheses.

Keywords: strategic management; industry cluster; crosstabulation; dependent samples; competitiveness; McNemar's test.

1 Introduction

The synergy of proximity within industrial clusters has long been an object of recognition from a plethora of standpoints; interest from researchers, policy-makers, and practitioners converges towards an appreciation of clusters, since the latter provide the backbone of collective prosperity, mutualism, and eusocial dynamics (Kumar et al. 2017). The root of the unique advantage of clusters is that in their manifestation they come to prove many well-accepted ideas and principles as moot. One basic concept within economics that is regarded as bypassed superfluously within industrial clusters is the scarcity principle; a principle so prevalent that it may be considered as self-evident. Yet, within industrial clusters, such a germination of (competing) activity occurs that the scarcity principle seems to impose reverse effects (Koliousis et al. 2018a). Within an industrial cluster setting, all members of the cluster flourish whence all their competitors do so as well, to the point that utilized business tactics may not differentiate themselves from any generic ones, but, surprisingly, always lead to the result of mutuality, regardless if they are head-on attacks or guerrilla tactics. From the viewpoint of strategic management, where the generic evolution of an industry flows from fragmentation to consolidation (Wheelen and Hunger 2011), a cluster would be an aberration; as it seems, a cluster may initiate as a consolidated entity, but through its fruition, it provides kindling for indirect and induced regional growth, innovation, and excellence, which in turn lead to fragmentation.

Right off the bat, from a preliminary disclosure of the existential features of clusters, one is drawn as if hastily descending a rabbit hole of paradox and admiration. Why within the strategic context of evolution for industries, clusters are poised to reverse-engineer the process? And why, within a given natural principle such as scarcity, do clusters need to object? Strategy and culture, respectively, are the answers; the illuminating distillates at the end of the quest. Clusters are the offspring of the amalgamation of (a culture of) mutualism

paired with outstanding strategic insight. There is no other way that a typical fishing village in a matter of years can become the largest shipbuilding cluster this world has ever witnessed; no other way that a collective of organizations can diversify in the face of adversity to an extent where its excellence and innovation inspires the globe. Clusters deliver sustainability and permanence through contesting individualism for mutualism and the established for the visionary. Clusters are beacons of popularity, as they prove to be exactly what is sought after and required from today's business context; the source of a sustainable competitive advantage not only for firms, but for regions and nations as well.

The governing parameters of clusters come to be true because within itself, a cluster provides the ingredients of prosperity, abundance, and resilience for all its members; so much so that competitors' tactics are rendered as irrelevant. Through the path that is innovation-driven competitiveness, each member of the cluster will be given the opportunity of a propitious niche. This mutual advantage is relinquished through a mechanism that at first glance may seem paradoxical, though after an analytical consideration it surfaces as evident that only paradox is remiss of a cluster's intrinsic parameters. This, because paradox is perceived only if the value-system wherein the analytical query performed differs from the one investigated. If one considers that under the scarcity principle, resources will not warrant a systemic concentration of entities within a given geographical location, then a cluster's manifestation seems paradoxical. But if one considers that eusocial synergies will emerge to compensate for resource scarcity and simultaneously innovation dynamics will set off to create wealth, markets, and resources out of thin air (where formally there were dead ends and no potential in sight), then the emergence of a cluster can simply be tagged as a systemic instance.

An evident corollary of cluster manifestation is that a great deal of interest may be generated from the aspect of strategic management, as is indeed the case. A special type of

clusters considers those formulated around a core of maritime activities and is the domain of the work herein. Maritime clusters stand out, both as cases of industrial cluster theory and as cornerstones of regional competitiveness. All the interesting, romantic, and eccentric dynamics of the maritime industry seem to transcend to these clusters, as well. Maritime clusters are volatile constructs that may pose as the analytical base for many interesting topics, for decades to come. Capitalizing upon the interest exhibited towards maritime clusters, industry and academia will tap within this domain and develop frameworks and models that will assist towards the analytical appreciation of these clusters of industry. Further analysis that will lead to understanding clusters is greatly required, as the topic is as elusive as it is interesting. At the same time, maritime clusters are used as a veneer buzzword, a contemporary definition of a sector of industry, and the path towards sustainability. To separate the wheat from the chaff, research in many directions is essential, to produce solid guidelines upon which practice and furthermore, society, may benefit. Maritime clusters hold the keys of regional development and innovation and as such, are pivotal to growth; through indirect impact, their repercussions and positive externalities ripple from regions to nations and beyond.

Within this introduction, two indicative characteristics of clusters have been presented. Their insubordination with reference to what strategic management considers the progression of an industry and their derivation from the scarcity principle. The explanation for these, was strategy and culture. Within this work, a first quantitative conclusion can be drawn as to the importance of the former, at least from an academic standpoint. The process towards this conclusion initiates with the extraction of an inclusive inventory of the body of knowledge with respect to maritime clusters, that is also absent from the literature. Therefore, the contribution of this research is relinquished in twain. On the one hand, an inventory of maritime cluster literature is procured and on the other, variables' correlation is examined

through a robust methodology, to examine the inference of the importance of strategy within the research of maritime clusters. Therefore, the research question as to the latter would be structured as ‘is strategic context important for the body of research concerning maritime clusters?’ Although the research conducted is inherent with allowances, as are all modelling constructs, the approach is indeed fruitful, as correlation is verified, and the research question addressed.

This work can pertain to a baseline for researching maritime clusters and industrial clusters in general, but furthermore, to policy drafting and managerial practice, as its conclusions are relevant with respect to these domains. At the same time, the methodology developed can be utilized for the investigation of association of other relevant categorical variables. The paper is structured as follows. The current section is succeeded by the literature review that was conducted as per the guidelines for structured reviews in Jesson et al. (2011); the review documents the inference of strategy within the body of knowledge. Then, the ‘materials and methods’ section follows, wherein the methodological instruments utilized are presented and analysed. The section analyzing the results of the statistical analysis follows, and the paper concludes with a brief discussion and recommendations for further research.

2 Literature review

From the Marshallian economies of agglomeration (Marshall 1920), to the analysis of industrial clusters with Porter's (1990) diamond model, academia has fostered a great deal of interest towards the entities of economic activity coined as clusters of industry. Clusters are important sources of knowledge creation (Asheim and Coenen 2005; Giuliani and Bell 2005; Lambrou et al. 2018; Pinto et al. 2018) and innovation (Baptista and Swann 1998; Furman et al. 2002; Hjalager 2010), to the point that they may harbour a regional, national, or international competitive advantage (Porter 1998). Within this scope, the domain of strategy is of distinct importance (Humphrey and Schmitz 2002). Although clusters do not provide deterministic conceptual entities (Martin and Sunley 2003), attempts at their classification and categorization may prove successful (Doloreux 2017; Gordon and McCann 2000).

The effects of clusters spillover many domains of economic (and other) activity, such as culture (Evans 2009), sustainable growth (Schmitz 1995), competitiveness (Bell and Albu 1999), network dynamics (Giuliani 2007; Wolfe and Gertler 2004), employment (Mitroussi 2008), and entrepreneurship (Feldman 2001; Feldman, Francis, and Bercovitz 2005; Stuart and Sorenson 2003). Within this context, governance and policy play a pivotal role (Davis 2011; Kuchiki 2011; Ninan 2005; Otsuka and Sonobe 2014; Ping et al. 2010; Russ and Jones 2012; Woo et al. 2017). Clusters have also provided research with a fruitful basis to formulate and assess models (Bell 2005) and frameworks (Iammarino and McCann 2006); especially if one considers their implications within strategic management (Lee 2006; Niu 2010; Pisa et al. 2017; Zhang 2004; Zheng and Liu 2015) and competitiveness (Chung 2016; Fang 2014; Kharub and Sharma 2017; Zhang and Zhao 2012), the impact of models and frameworks is particularly relevant.

Michael Porter's (1998) definition, as to the fact that "clusters are geographic concentrations of interconnected companies and institutions in a particular field" is an

indicative point of reference. As the focus of the present research pertains to clusters active in the maritime sector, *maritime clusters* could be coined as geographic concentrations of interconnected companies and institutions in the maritime field; as stemming from M. Porter's generic definition. Although it is accepted that maritime clusters may provide important constructs for regional and national competitive advantages (Chang 2011; Doloreux and Shearmur 2018; Jenssen 2003), as well as for distinct sections of the maritime industry (Chang et al. 2017; De Langen 2004; Shinohara and Saika 2018), their rudiments are still under investigation (Koliousis et al. 2017, Koliousis et al. 2018b). To this end, an inclusive inventory of the body of knowledge of maritime clusters would be relevant, if not required, for future research. From a review within the literature concerning maritime clusters, one can observe that the prevalent themes of general cluster theory are included within these distinct clusters, as well.

As Marshall and Porter can be considered pillars of the theory, one can observe that the Marshallian agglomeration economies are utilized and tailored to maritime cluster cases (De Langen 2002; Pagano et al. 2012) and Porter's diamond model is utilized to extract conclusions as to the competitive position of these clusters (Benito et al. 2003). The study of maritime clusters can include a temporal analytical aspect, as per the effect of strategic decisions or external threats on specific clusters; such as the impact of the 2008 crisis (Simões et al. 2016), or the ramifications of infrastructure expansion plans (Pagano et al. 2016). Technology (Agatić et al. 2011; Aksentijević et al. 2014; Wang et al. 2016; Wang et al. 2015), innovation (Jenssen 2003; Makkonen et al. 2013; Monteiro 2016; Pinto et al. 2015; Pinto and De Andrade 2013), competitiveness (Kim 2015; Laaksonen and Mäkinen 2013; Mäkinen et al. 2014), policy (Doloreux and Melançon 2006; Makkonen et al. 2013; Othman et al. 2012) and governance (De Langen 2004; De Langen 2006; Lam et al. 2013), economic development (Brandt et al. 2010; Bai and Lam 2015; Doloreux et al. 2016; Lv and Chang

2013), strategy (Salvador et al. 2016; Stavroulakis and Papadimitriou 2016; Yang et al. 2016), competition and cooperation (Dong et al. 2011; Jin and Zhen 2013; Kraaijeveld 2012; Shinohara 2009; Wang et al. 2012), and education (Ali 2009; Ana et al. 2006; De Langen 2008; Figari et al. 2015), seem to be the dominant themes within the literature of maritime clusters; as they are within generic industry clusters. Therefore, one can hazard that clusters portray some general characteristics, which then are tailored and exhibited as per the peculiarities of each central industry wherein the cluster is active.

Maritime clusters provide the ground where many instruments are developed, utilized (Morrissey and Cummins 2016), and/or tested (Deng et al. 2013) with reference to cluster classifications, typologies, theories, and evolution (Halse 2017; Ibrahimi 2017; Koliousis et al. 2018a; Koliousis et al. 2018b; Salvador 2014; Zhang and Lam 2017; Zhang and Lam 2013). At the same time, models (Iannone 2012; Jansson 2011; Ji and He 2010) and frameworks (Monteiro et al. 2013; Yap et al. 2011; Zagkas and Lyridis 2011) are developed, as they are important and applicable in many maritime cluster cases, albeit with measuring specific indicators within the cluster (Lv et al. 2010), or providing feedback for the cluster itself (Brett and Roe 2010; Shinohara 2010). Therefore, not only do maritime clusters exhibit the definitive industry cluster traits, but simultaneously, they provide a dynamic field for the development of qualitative and quantitative instruments. These instruments can bear applicability to maritime clusters, but their use may not be restricted to these, as they may find resonance in a distinct scientific domain, such as strategic management (Stavroulakis and Papadimitriou 2017; Stavroulakis and Papadimitriou 2016). Through their potential in developing and assessing theories, frameworks, and models, maritime clusters can effectively become agents of progression for many research domains.

A preliminary conclusion that can be drawn from the literature review is that on the one hand the major topics of interest within a maritime cluster are extracted and respectively

allocated within the literature and on the other that maritime clusters provide a dynamic arena for analytical potential, both qualitative and quantitative. On the antipode, a subsequent concern that arises, reflects the fact that even if the theme of the research does not explicitly state relevance to strategic management, the research may indeed be classified as a strategic analysis, or pertain to an important aspect of strategic management. It seems that many papers provide contributions to the domain of strategic management, even if this was not their primary intention. A recurring instance throughout the body of knowledge concerns the fact that innovation, competitiveness, cooperation, and/or policy may be discussed and analysed, and that the primary contribution of the research may indeed reside within any one of these respective sectors, but that laterally, the analysis concerns, or can be utilized for, strategic management. Therefore, a relevant issue and the research question within, concerns the impact of strategic management within the research corps of maritime clusters. The venture to tackle the rudiments of this query would require compiling an inclusive inventory of the literature, given an accepted level of quality, as one that derives from a database that safeguards the maintenance of quality standards. Once the inventory is extracted, the body must be analysed given a structured protocol. At first, irrelevant studies and duplicates should be excluded and then, once the basic inventory of the literature concerning maritime clusters is extracted, an analysis and classification as to the strategic query above, should be conducted. Still though, through this process, one would only arrive at a list of contributions to the body of knowledge that can be relevant to strategic management. The importance of this observation would remain elusive.

To provide a definitive answer to the problem of investigating the importance (and thus tackling the nature of the basic query) of strategic management in maritime cluster studies, the solution could materialize as the analytical expression of association between two categorical variables. This, to perform a robust statistical decision test that can provide an

answer to the research question, given an acceptable level of significance. Therefore, one categorical variable would have to be the 'presence of a case relevant to strategic management' and the other, the 'academic relevance of the strategic management case.' If correlation among the two categorical variables can be investigated, then the initial observation of the significance of strategic management for maritime cluster research could be substantiated and a relevant contribution to the literature produced; furthermore, strategic management of maritime clusters could surface as a distinct domain of importance for the research body. A pertinent statistical decision test that will investigate this thesis per an examination of independence and/or homogeneity between the two indicators must be selected. The latter should also take heed of the fact that the categorical variables stem from objects of investigation (scientific publications) that each constitute a contribution to an interdependent body of knowledge; a distinct contribution's results are formulated and rest upon the whole body of knowledge, without which, the contribution could not have materialized; thus, the data cannot be considered independent (Breslow 1982; McNemar 1947). Simultaneously, one can observe that a kind of random pairing and/or matching occurs, as the samples bear similarities on all covariates except the exposures under investigation (strategy and academic impact). In addition, informative and structural elements of a publication such as the title, keywords, and references, could provide a level of domain similarity and to an extent, dependence (e.g. the publication titled '…using Porter's diamond…' is dependent upon the publication of Porter's diamond). Latent to the above considerations, metrics of reliability should be extracted, to indicate the strength of the results. The next section provides the analytical foundation upon which the contribution of this research will rest.

3 Materials and methods

The preliminary task is to provide an inclusive inventory of maritime cluster research. Then, this inventory will be analysed as to the categorical variables produced, and a methodological instrument to examine association among these will be employed. For this end, a consolidation of the literature with respect to maritime clusters is procured, as per the systematic review conducted (Jesson et al. 2011); then, following a coding protocol, the literature is categorized, and relevant statistical decision tests are administered. The selection of the academic database was evidence-based (Falagas et al. 2008), to provide an academic index with extensive coverage, but without sacrificing consistency, accuracy, and quality. This selection could result in the fact that a relevant publication could be excluded from the inventory, but this is a risk that would be embedded in any trade-off concerning the consolidation of scope and quality. Consequently, a Scopus™ search within the scientific domain of the social sciences ('Social Sciences,' 'Economics, Econometrics and Finance,' and 'Business, Management and Accounting') for the fields of 'maritime cluster,' 'seaport cluster,' 'maritime transport cluster,' 'port cluster,' and 'shipping cluster,' is conducted. Then, the temporal range is limited to the papers published up to (and including) 2016. As academic impact formulates a variable under examination for the present study, one should allow a leeway for late literature to be cited (or not). For this end, papers that were published after 2016 are excluded from the inventory, but their citations to the body of knowledge are not. Therefore, the inventory pauses at 2016, but the time for citations does not, allowing for many publications of even 2016 to be cited, as is the case. Thus, the analysis holds its gross inventory, that after the exclusion of duplicates and irrelevants, arrives at a list of one hundred and eighteen maritime cluster literature extracts, as rendered within the Appendix (Table 4).

With the extraction of the inventory, the categorical variables must be developed. Corollary to the structured literature review, is the fact that the literature, to an extent, bears a spill-over capacity of contribution to strategic management. As mentioned, it seems that many publications are extremely relevant to strategic analysis, even if this was not their primary goal and/or focus. It would be of interest to support or dismiss this observation with a statistical method, one that can investigate variables' correlation. One variable would pertain to the existence of the premise of strategic analysis. The second variable would be a marker of academic relevance and/or impact, that can be correlated with the marker of citations. To transform citation counts to a binary variable, the evident solution would be to have two states, one for the presence of citations and one for their absence. With this rationale, one could venture to investigate the correlation of the existence of a tactical dimension within the literature, with the presence or absence of citations. A major drawback of this methodology would pertain to the temporal aspect of the citation count and if the body, especially recent, would have enough time to gather a citation. Some citations of papers as included in the inventory are probably within others that are in the publication stages. But, as the analysis will inadvertently include the aspect of the present and the immediate, this is an allowance that would be inherent within the analysis, regardless. Implicitly, the categorical variables both include the statement of 'at this exact point in time.' Apart from this modelling allowance, the fact that the inventory's cut-off point was 2016 and many very recent literature extracts did indeed hold citations (whereas many earlier papers did not), may be indicative of the methodology's validity. At the same time, one will gather that another drawback of the study is the fact that the variable, as binary, reflects presence or absence of citations; under another perspective, the variable of academic relevance could still be categorical, but in order for a publication to count as relevant, one could consider the cut-off point of citations to be more than unity (although, zero citations do imply an outlier for a

relevant and growing body of knowledge); this eventuality can concern a future study, that will document the convergence or divergence of its results with the results of the present paper. At this point it would be interesting to mention that this research is an indicative case of the 'Hawthorne effect,' as with its publication, even the papers with null citation count will have (at least) one citation, stemming from the present work. Therefore, this study will alter the behaviour of the inventory (and subsequent analyses) and will bear replicable results only if citation counts before its publication are utilized; although, as mentioned, the cut-off for academic relevance can be selected to pertain to more than one citation.

To proceed with the analysis of the inventory, the categorical (and dichotomous) variables are formulated as 'presence of a case relevant to strategic management' and 'presence of citations.' Through this methodology and the statistical treatment of the variables, if these were to produce statistically significant results, a widely accepted aspect within the literature, that of the importance of strategy, would shift from the implicit domain, to the explicit; as backed up by the robustness of a designated statistical method. To proceed with the analysis, the publications have been coded following a designated protocol (Kitchenham and Lawrence Pfleeger 2003; Leonidou et al. 2010), per general premise and citation count. As per the citation count the analysis was relatively simple, as it required the mere coding of an apparent dichotomous trait, the presence or absence of citations; for the categorization of the research premise, the analysis was more elaborate and required the method of content analysis (Eteokleous et al. 2016). The body of research was analysed based on the protocol which comprised of the four pillars of Wheelen and Hunger's (2011) strategic management model. If a paper could be included (and/or provide a contribution) in any pillar of the generic strategic management model, it would be considered as applicable and relevant to strategic analysis. If not, the protocol would register the paper as out of scope for strategic management. The dichotomous nature of the variables places them in either one

of two sets, that both belong to the universal set ‘U’ (Figure 1); either a literature extract may be applicable to strategic management (or not); and it may be cited (or not).

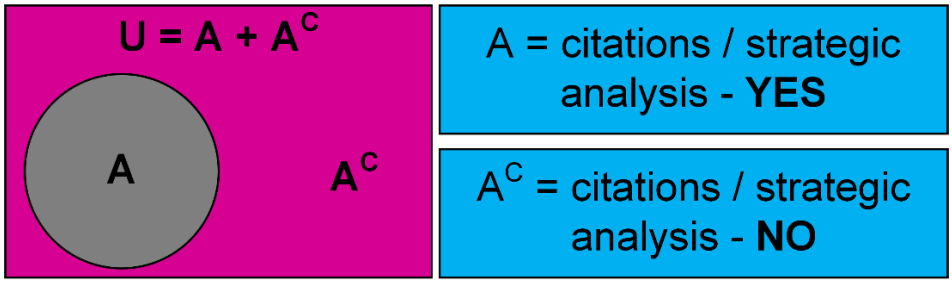

Figure 1. The dichotomous nature of the variables (Source: Authors).

When coding is complete, considering the dichotomization of the variables ‘Strategy’ and ‘Citations,’ the count of the variables compiles a two-by-two contingency table (Figure 2).

		Citations	
		YES	NO
Strategy	YES	a	b
	NO	c	d

Figure 2. The two-by-two contingency table (Source: Authors).

The interest lies into understanding the nature of correlation (if any) among these two dichotomous variables; if these are independent (or not) and if relevant metrics pertaining to specific measures of association can be procured. The two measures of association employed are the odds ratio and the risk ratio (relative risk). The odds ratio (OR = a*d / b*c) indicates the likelihood of exposure associated to the effect (for this study, exposure signifies strategic premise and the effect is academic impact), thus quantifying the relationship of the two categorical variables. The risk ratio (RR) is the ratio of the risk of the presence of citations

within the publications inclusive of a strategic premise, to that among the ones without a strategic premise. It is calculated as the quotient of the risk of citations among publications pertaining to the domain of strategic management [= a / (a + b)], to the risk of citations among the publications with no bearing to strategy [= c / (c + d)]. The risk ratio, if greater than unity, will signify the increased effect of the presence of a strategic topic for the presence of citations. If it is found less than one, it will infer the adverse effect. In addition, the risk ratio can be utilized to indicate the likelihood that the association bears a causal relationship (Bonita et al. 2006; U.S. Department of Health and Human Services Centers for Disease Control and Prevention 2006). These measures of association can provide useful indications and quantify the effect magnitude that exposure to a strategic topic may bear upon the subsequent academic relevance of a publication.

To explore variables' correlation, i.e. if the premise of strategic analysis pertains to an effect, dependency, and/or association for academic impact, statistical hypothesis testing may be administered. Before said process, one must ascertain the nature of the samples within the crosstab as per their independence, as said attribute will govern the prudent selection of the respective statistical hypothesis test. The generic sample of analysis is a body of research that consists of publications. One must consider that each (and every) publication contributes to the body of knowledge based upon previous contributions to the same body; inadvertently, seldom can research be produced without precedent (methodological and referential). The extent of this precedent is documented by the mere count of referenced literature within a publication. Therefore, a preliminary indicator of dependency for a publication can pertain to its references. But this fact within itself produces the definition of dependency, in the sense that each publication is dependent upon the body of knowledge, i.e. other publications. In addition, since no authorships, affiliations, or classification of any kind is inherent within the present analysis (except the classification that concerns the variables analyzed), conceptually,

one can consider that the samples of the study reflect random pairing, as well. Therefore, one has ground to not only consider the samples as dependent, but as randomly matched.

McNemar's test (1947) for dependent nominal data is employed, to investigate marginal homogeneity (to determine equality of the row and column marginal frequencies) of the contingency table. The generalized version of McNemar's test supposes a test sample as (x_1, y_1), (x_2, y_2), …, (x_n, y_n). The null hypothesis H_0 is $P(X < Y) = P(X > Y)$. Let $n_1 = \#\{i: x_i < y_i, i = 1, \dots n\}$, $n_2 = \#\{i: x_i > y_i, i = 1, \dots n\}$ and $r = \min(n_1, n_2)$, wherein n_1 is the number of cases where $x_i < y_i$, $i = 1, \dots n$ and n_2 the number of cases where $x_i > y_i$, $i = 1, \dots n$. The expected frequencies' (n_1 and n_2) correlation is 1:1, given that there is no factual divergence between the trials. The binomial distribution can investigate any discrepancy from the expected ratio. The (two-tailed) calculated probability is included in Equation (1).

$$Exact\ p - value\ = 2 \times \sum_{i=0}^{r} \binom{n_1 + n_2}{i} (1/2)^{n_1 + n_2} \quad (1)$$

For the two-by-two table, the null hypothesis asserts that H_0: $\pi_{12} / \pi_{21} = 1$, whereas H_1: $\pi_{12} / \pi_{21} \neq 1$. For an accepted significance level ($\alpha = 5\%$), if the p-value < α, then one can ascertain statistical association. Therefore, if the null hypothesis of this statistical test were to be rejected, then this result would be important as to the fact that strategic management and academic relevance would share a dependent relationship. In addition, analysis as to the exact correlation could be conducted and reflected through the measures of association produced. Furthermore, the power of the statistical decision test should be computed, to bear an indicator of reliability. The results of the analysis are presented in the following section.

4. Results

As per the coding protocol, the inventory of maritime cluster literature is allocated in four groups, that compile the distinct categories of a simple contingency table (Table 1). The initial observation of the literature review is warranted within the Table, as fifty-five out of the one hundred and eighteen papers can be regarded as applicable to strategic management and are cited simultaneously. Subsequently, it would be relevant to investigate the exact correlation of the existence of citations within the premise of strategic analysis. The reliability (statistical power) of the analysis would have to be computed as well, in the form of the probability of correctly rejecting the null hypothesis when the alternative hypothesis is true (the complement of a type II error). This power analysis shall be conducted both prospectively (a priori) to determine the necessary sample size to achieve an adequate power of the test and retrospectively (post hoc) to evaluate the power achieved with the actual sample.

Table 1. *'Strategy' and 'Citations' crosstabulation.*

Strategy * Citations Crosstabulation			**Citations**		**Total**
			yes	**no**	
Strategy	**yes**	Count	55	35	90
		% of Total	π_{11} = 46.6%	π_{12} = 29.7%	π_t = 76.3%
	no	Count	12	16	28
		% of Total	π_{21} = 10.2%	π_{22} =13.6%	1 - π_t = 23.7%
Total		Count	67	51	**118**
		% of Total	π_s = 56.8%	1 - π_s = 43.2%	

Within the crosstab, the probability π_{ij} signifies the respective probability of each state. To compute the power of the test based on the given sample size, one would have to calculate the probability of discordant pairs and the odds ratio of the proportion of discordant pairs, to denote effect size. The probability of discordant pairs is $\pi_D = \pi_{12} + \pi_{21} = 0.297 + 0.102 = 0.399$, whereas the odds ratio of the proportion of discordant pairs is equal to $OR_D = \pi_{12} / \pi_{21}$

= 0.297 / 0.102 = 2.912. The total sample size (N=118), the level of significance (α = 5%), the probability of discordant pairs (π_D = 0.399), and the odds ratio of the proportion of discordant pairs (OR_D = 2.912), constitute the input of the retrospective statistical power calculation. The post hoc analysis that computes achieved power of the test, renders a result of 91.6% (Figure 3, Table 2). Considering that the academic standard for power adequacy is a value of at least 80%, then the statistical power of the study, i.e. its ability to detect a factual eventuality, is more than adequate. Thus, the present analysis has a very high probability to correctly reject the null hypothesis and a very low probability of a type II error.

Table 2. *Risk estimate and statistical power (Source: Authors, G*Power™ and SPSS™ output).*

Risk Estimate			
	Value	95% Confidence Interval	
		Lower	Upper
Odds Ratio	2.095	0.887	4.952
Risk Ratio	1.426	0.902	2.255
N of Valid Cases	118		
Statistical Power	**Exact -** Proportions: Inequality, two dependent groups (McNemar)		
A priori: Compute required sample size			
Input Odds ratio = 2.095 α err prob = 0.05 Power (1-β err prob) = 0.80 Prop discordant pairs = 0.399	**Output** Lower critical N = 23 Upper critical N = 40 Total sample size = 78		
Post hoc: Compute achieved power			
Input Odds ratio = 2.912 α err prob = 0.05 Total sample size = 118 Prop discordant pairs = 0.399	**Output** Power (1-β err prob) = 0.916086 Actual α = 0.029305		

Considering an a priori analysis to determine sample size prospectively, the input will pertain to the level of significance (α = 5%), the probability of discordant pairs (π_D = 0.399), the odds ratio of the proportion of discordant pairs (OR_D = 2.912), and the requested power of the test. If one was to select a level of statistical power of 80%, as would be acceptable, then the

total sample size would have to be $N_{80\%} = 88$ ($< N_{actual} = 118$), whereas the minimum and maximum critical values of the sample would be $N_{CRmin} = 11$ and $N_{CRmax} = 24$ respectively. With $N_{actual} = 118$, the sample of the study can be regarded as more than adequate, surpassing the academic threshold for statistical power. The power of the test is plotted against total sample size in Figure 3. For a sample under sixty the power would bear at 60%, whereas for a sample over one hundred and five, statistical power exceeds 90%.

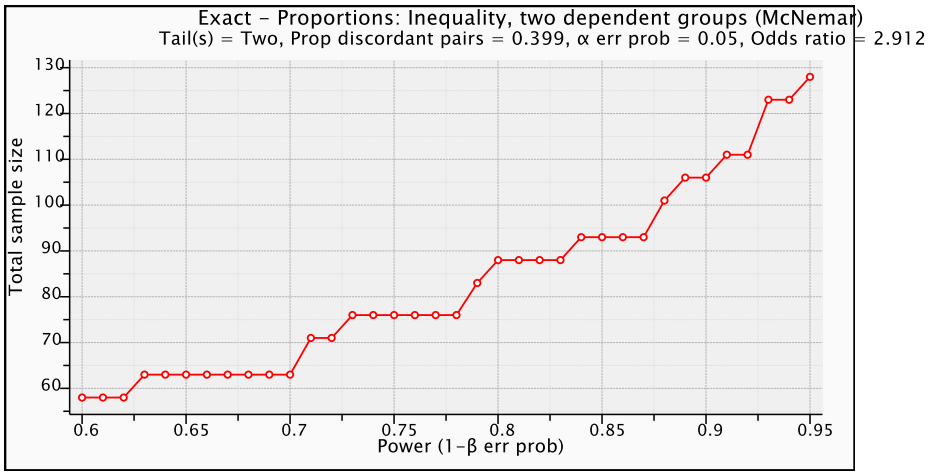

Figure 3. Power of the test as per total sample size *(Source: Authors, G*Power™ output).*

With an acceptable statistical power, one can proceed with calculating the measures of association, as well as with the statistical decision test. The 95% confidence interval for the odds ratio (OR) of the crosstab falls within the region of $OR_{min95} = 0.887$ to $OR_{max95} = 4.952$, with a value of OR = 2.095 (Table 2). This odds ratio pertains to a distinct indicator and is a different metric from the odds ratio of the proportion of discordant pairs in the previous calculation (that specified effect size); this odds ratio designates the odds of 'exposure' to strategy within the cited literature, to the odds of 'exposure' to strategy within the non-cited literature. Therefore, an OR = 2.095 signifies that the variable of (relevance to) 'Strategy' is associated with the variable of (presence of) 'Citations,' not in the sense that it proves that

‘Strategy’ causes ‘Citations,’ but in that ‘Citations’ are associated to ‘Strategy,’ in the manner that the presence of a strategic case raises the odds of citations (over two times), as compared to its absence. A measure of association that is used in assessing the likelihood of an association representing a causal relationship, is the risk ratio. For the present analysis, the risk ratio is calculated at RR = 1.426, with RR_{min95} = 0.902 and RR_{max95} = 2.255. A value of the risk ratio above two is considered strong, wherein one could safely infer a causal relationship. At the same time, a weaker association (over the value of one but below the value of two) does not disqualify a causal relationship. As to the exact mechanism of causation, more research is required, although preliminary evidence of causality is relinquished herein. The exact calculation of the risk ratio signifies that given a publication with strategic relevance, the ‘risk’ of citations is 1.426 times higher (or 42.6% higher) than the risk of citations without a strategic case.

Given the dependent nature of the data, McNemar's test is administered, whose null hypothesis considers marginal homogeneity. It reflects the thesis that the probability of a case relevant to strategic management and absent of citations, will equalize the probability of the absence of a strategic case that is simultaneously cited. If these two events share commonality in their probability to materialize, strategy can hardly share an association, impact, or effect to the variable of academic impact. The opposite though, the rejection of the null hypothesis, thereby delivering statistical significance to the results, signifies statistical dependence (albeit causal or not) between the two variables. Rejection of the null hypothesis bearing evidence of the association of the variables is not a definitive indicator of causality. Although, especially with the risk ratio calculated over unity, there is evidence to indicate a causal relationship and warrant further investigation as to the exact nature of the association, through causal inference. The latter process will determine if the observed correlation is indeed causal. The result of McNemar’s test is as follows (Table 3).

Table 3. The results of McNemar's test (Source: Authors, SPSS™ output).

Chi-Square Test		
	Value	Exact Sig. (2-sided)
McNemar's Test		0.001[a]
N of Valid Cases	118	
[a.] Binomial distribution used		

As the p-value of McNemar's test stands at 0.1% = p-value < α = 5%, the result of the statistical hypothesis test is statistically significant. The null hypothesis of marginal homogeneity is rejected; this result delivers strong evidence that, for the domain of maritime clusters, the premise of strategy and a publication's academic impact are associated. In addition to this correlation, the measures of association calculated reflect a quantitative approach as to the exact representation of this dependence (odds ratio) and provide preliminary indications of causality (risk ratio), as well. These results provide a stepping stone for further research, to strenuously examine said correlation and (potential) causality, as the association between these variables can bear important contributions to the literature. This work has employed statistical method and provided results accompanied with solid statistical power, as to the indication that where there is presence of an analysis pertinent to the domain of strategic management, this seems to resonate with academia. Through this research, said indication has been substantiated.

5. Conclusions

Clusters of industry provide interesting analytical topics for academia and practice. They claim to harbour regional and/or national growth, competitive advantages, and sustainability, as they foster healthy competition and synergistic cooperation that drive value-creation and innovation to novel frontiers. Within the literature, clusters of many types can be found to bear significant impact upon the regions that include them. A category of clusters that has witnessed distinct popularity, is the one pertaining to the maritime sector. Although the influence and importance of maritime clusters is recognised, the literature with reference to these clusters has not been inclusively documented, categorized, and analysed. For this end, a structured review of the literature is conducted within this work. A preliminary extract from this review is that there is a high incidence of literature relevant to the domain of strategic management, notwithstanding the implicit or explicit inclusion of the latter. It would be interesting to initially document this incidence and subsequently investigate if this eventuality is important for academia. The first aspect of the study would require a categorization of the literature based on a dedicated protocol, to extract the publications relevant to strategic management. The second aspect would entail investigating the correlation of the occurrences of a strategic topic within the literature, with a marker of academic relevance and impact.

To explore this corollary, the aspects of interest are represented within two dichotomous categorical variables; the existence or absence of the premise of strategic analysis within a publication (relevance to strategic management) and the existence or absence of citations (academic impact). Subsequently, maritime cluster literature was coded per study protocol and all cases were categorized as per their adherence to the variables, to produce a crosstab. With the extraction of the latter, measures of association and statistical decision tests can be applied. The odds ratio, a relevant metric that quantifies the strength of association shared by the variables is calculated, along with the risk ratio, that indicates the

strength of association between the variables and is extremely useful in assessing the likelihood that said association derives from a causal relationship. To investigate correlation of the categorical variables, one can employ a chi-squared test, although the independence of the samples must be determined. The present study concerns publications stemming from a body of knowledge, wherein contributions are interdependent, as evidenced by cited literature, common aims and scope, and the approach of contributing to a body of knowledge. The very idea of contribution presupposes that there is a basis whereupon the contribution will rest; the contribution is dependent upon the relevant body of knowledge. Therefore, marginal homogeneity of the crosstab is investigated through McNemar's test for dependent samples.

In addition to the measures of association and the statistical decision test, statistical power is calculated, both prospectively and retrospectively. The prospective analysis shows that the actual sample of the study is more than adequate to achieve acceptable statistical power, whereas the retrospective analysis returns a statistical power of over ninety percent. Therefore, one can conclude that the statistical hypothesis test has a very high probability of correctly rejecting the null hypothesis and consequently, a very low probability of type II error. The measures of association both indicate strength of association between the variables. The odds ratio suggests that the presence of a strategic case within a publication raises the odds of citations, when compared to its absence. The risk ratio provides preliminary evidence of the likelihood that said association is based on a causal relationship. Finally, McNemar's test provides statistically significant results. All the techniques employed within, point to the fact that for the domain of maritime clusters, the presence of an aspect pertaining to strategic management is important, as the incidence of an analysis relevant to strategy is correlated with academic impact and these two constructs may share a causal relationship, as well.

The contribution of this study, besides providing an inclusive inventory of the literature with reference to maritime clusters, is that it delivers strong evidence of correlation between the categorical variables of strategic management and academic impact. These results should be strengthened by future studies, with the further dissection of the literature and the investigation of confounding factors and effect modifiers within the variables. In addition, the causal inference of the results can be supplemented and evolve, stemming from the causation indications generated herein.

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Appendix

Table 4. Maritime cluster literature arranged per year of publication.

No.	Document title	Authors	Year
1	The core competences of the Antwerp seaport: An analysis of "port specific" advantages	Haezendonck, E., Pison, G., Rousseeuw, P., Struyf, A., and Verbeke, A.	2001
2	Clustering and performance: The case of maritime clustering in the Netherlands	De Langen, P.W.	2002
3	UK tonnage tax: Subsidy or special case?	Selkou, E. and Roe, M.	2002
4	Riding the waves	[No author name available]	2003
5	Innovation, capabilities and competitive advantage in Norwegian shipping	Jenssen, J.I.	2003
6	A cluster analysis of the maritime sector in Norway	Benito, G.R.G., Berger, E., De La Forest, M., and Shum, J.	2003
7	Innovation brings success to Nordic countries	[No author name available]	2003
8	Regrouping for success	Segercrantz, H.	2004
9	Governance in seaport clusters	De Langen, P.	2004
10	Analysing the performance of seaport clusters	De Langen, P.W.	2004
11	Shipping and ports in the twenty-first century: Globalisation, technological change and the environment	Pinder, D. and Slack, B.	2004
12	Dutch shipbuilders pin hopes on navy modernisation	Lok, J.J.	2004
13	Cruise industry builds strong Finnish maritime cluster	[No author name available]	2004
14	The heart of the shipping industry	[No author name available]	2005
15	Collective action regimes in seaport clusters: The case of the Lower Mississippi port cluster	de Langen, P.W. and Visser, E.-J.	2005
16	Meritime meeting place	[No author name available]	2005
17	Scandinavia: Hothouse for maritime innovation	[No author name available]	2005
18	St. John's ocean technology cluster: Can government make it so?	Colbourne, B.	2006
19	The ambitious wager of Quebec's maritime cluster: Current situation and public policies | [Le pari ambitieux du cluster maritime du Québec: État de la situation et politiques publiques]	Doloreux, D. and Melançon, Y.	2006
20	Business game 2005 (port eCluster): The new learning approach	Ana, P., Silvia, G., Andrej, M., and Nataša, R.	2006
21	Chapter 20 Stakeholders, Conflicting Interests and Governance in Port Clusters	de Langen, P.W.	2006
22	Enhancing performance in a seaway	[No author name available]	2006
23	Quality of opportunity: Dutch defence industry braces for outcome of election	Janssen, J.	2006
24	Hitting the ground running	Yards, A. and Heikinheimo, J.	2007
25	When seafaring is (or was) a calling: Norwegian seafarers' career experiences	Mack, K.	2007
26	Logistic innovation in global supply chains: An empirical test of dynamic transaction-cost theory	Visser, E.-J.	2007

27	Employment of seafarers in the EU context: Challenges and opportunities	Mitroussi, K.	2008
28	Analysing training and education in ports	de Langen, P.W.	2008
29	Exploring the applicability of electronic markets to port governance	Lambrou, M.A., Pallis, A.A., and Nikitakos, N.V.	2008
30	Zeebrugge, or the emergence of a new oceanic gateway in the heart of the Northern Range | [Zeebrugge ou l'émergence d'une nouvelle porte océane au cœur du Northern Range]	Charlier, J. and Lavaud-Letilleul, V.	2008
31	Maritime clusters in diverse regional contexts: The case of Canada	Doloreux, D. and Shearmur, R.	2009
32	Port competition paradigms and Japanese port clusters	Shinohara, M.	2009
33	A comparative analysis of free trade zone policies in Taiwan and Korea based on a port hinterland perspective	Yang, Y.-C.	2009
34	Maritime education - Putting in the right emphasis	Ali, A.	2009
35	The potential for the clustering of the maritime transport sector in the greater Dublin region	Brett, V. and Roe, M.	2010
36	Maritime cluster of Japan: Implications for the cluster formation policies	Shinohara, M.	2010
37	Maritime clusterisation and cluster facilitators in the European Union | [POMORSKA KLASTERIZACIJA I CIMBENICI RAZVITKA U EUROPSKOJ UNIJI]	Batur, T.	2010
38	Development potentials and networks of maritime clusters in Germany | [Entwicklungspotenziale und Netzwerkbeziehungen maritimer Cluster in Deutschland]	Brandt, A., Dickow, M.C., and Drangmeister, C.	2010
39	An economic logistics model for the multimodal inland distribution of maritime containers	Iannone, F. and Thore, S.	2010
40	A collaboration service model for a global port cluster	Toh, K.K.T., Welsh, K., and Hassall, K.	2010
41	Study on resource integration and innovation of Bohai-circle ports	Lv, R., Zhang, F., Zhong, W., and Wei, B.	2010
42	Optimization of two-stage port logistics network of dynamic hinterland based on bi-level programming model	Ji, M.-J. and He, M.-Y.	2010
43	A framework for modelling and benchmarking maritime clusters: An application to the maritime cluster of Piraeus	Zagkas, V.K. and Lyridis, D.V.	2011
44	Maritime piracy: A Hong Kong perspective	McKinnon, A.	2011
45	An Innovation and Engineering Maturity Model for marine industry networks	Jansson, K.	2011
46	Information management in seaport clusters | [Upravljanje informacijama u lučkim klasterima]	Agatić, A., Čišić, D., and Tijan, E.	2011
47	Evolutionary game of co-opetition strategy among port cluster	Dong, G.	2011
48	A theoretical framework for the evaluation of competition between container terminal operators	Yap, W.Y., Lam, J.S.L., and Cullinane, K.	2011
49	Nor-Shipping 2011: Nor-Shipping 2011: Next generation shipping	[No author name available]	2011
50	Maritime clusters: What can be learnt from the South West of England	Chang, Y.-C.	2011
51	The strength of Malaysian maritime cluster: The development of maritime policy	Othman, M.R., Bruce, G.J., and Hamid, S.A.	2011
52	Maritime community and its human resource mobility	Inoue, K.	2011
53	Dutch innovation celebrated during Maritime Awards Gala	McFedries, R.	2011
54	Shipping Taxation	Marlow, P. and Mitroussi, K.	2012
55	Structuring a knowledge-based maritime cluster: Contributions of network analysis in a tourism region	Pinto, H. and Cruz, A.R.	2012
56	The dynamism of clustering: Interweaving material and discursive processes	Fløysand, A., Jakobsen, S.-E., and Bjarnar, O.	2012

57	A model optimizing the port-hinterland logistics of containers: The case of the Campania region in Southern Italy	Iannone, F.	2012
58	The private and social cost efficiency of port hinterland container distribution through a regional logistics system	Iannone, F.	2012
59	Cooperation or competition Factors and conditions affecting regional port governance in South China	Wang, K., Ng, A.K.Y., Lam, J.S.L., and Fu, X.	2012
60	Come fly the Dutch flag	Van Den Hanenberg, G.	2012
61	Cooperation is key for the Dutch maritime industry	Kraaijeveld, A.	2012
62	Economies of agglomeration and supply chain network effects in transportation and logistics clusters: The case of the Panama maritime cluster	Pagano, A.M., Sánchez, O., and Ungo, R.	2012
63	Dutch maritime innovations honoured	Van Den Hanenberg, G.	2012
64	A differentiation framework for maritime clusters: Comparisons across Europe	Monteiro, P., de Noronha, T., and Neto, P.	2013
65	Sea and littoral localities' economy: Exploring potentialities for a maritime cluster - An integrated analysis of Huelva, Spain and Algarve, Portugal	Ortega, C., Nogueira, C., and Pinto, H.	2013
66	Innovation types in the Finnish maritime cluster	Makkonen, T., Inkinen, T., and Saarni, J.	2013
67	The influence of managers and organisational profiles in CSR decision-making. Ideas for implementation in the maritime sector	Arizkuren-Eleta, A., Gartzia, L., Baniandrés-Abendaño, J., Castillo-Mory, and E., Martínez-Lozares, A.	2013
68	Maritime cluster evolution based on symbiosis theory and Lotka-Volterra model	Zhang, W. and Lam, J.S.L.	2013
69	The Competitiveness of the Maritime Clusters in the Baltic Sea Region: Key Challenges from the Finnish Perspective	Laaksonen, E. and Mäkinen, H.	2013
70	Research on the maritime cluster competition based on ecological niche theory	Jin, J.-C. and Zhen, H.	2013
71	Evaluation of the relevance measure between ports and regional economy using structural equation modeling	Deng, P., Lu, S., and Xiao, H.	2013
72	Relationship between inland ports cluster of Tianjin port and regional economy based on DEA	Lv, J. and Chang, Z.	2013
73	Stakeholder management for establishing sustainable regional port governance	Lam, J.S.L., Ng, A.K.Y., and Fu, X.	2013
74	Evaluating the capabilities of port logistics based on structural equation modeling	Deng, P., Lu, S., and Xiao, H.	2013
75	Research on OD distribution of domestic coastal trade container shipping based on gravity model	Qing, S., Tao, D., and Cunyi, X.	2013
76	Holland goes Brazil	Van Den Hanenberg, G.	2013
77	Analysis of parameters and processes of Latvian seafarers' pool	Gailitis, R.	2013
78	Key innovation drivers in maritime clusters	Pinto, R.A.Q. and De Andrade, B.L.R.	2013
79	Maritime clusters evolution. The (not so) strange case of the Portuguese maritime cluster	Salvador, R.	2014
80	The establishment of the Danish International Ship Register (DIS) and its connections to the maritime duster	Sornn-Friese, H. and Lversen, M.J.	2014
81	General insights of the portuguese maritime economy and particularly of the algarve region: Contributing towards a strategic vision	Valadas-Monteiro, P.	2014
82	Energy and maritime clusters in the eastern Baltic sea region: Competitiveness through international inter-cluster cooperation?	Mäkinen, H., Laaksonen, E., and Liuhto, K.	2014
83	Modeling of economically sustainable information security management systems in seaport clusters	Aksentijević, S., Tijan, E., and Čišić, D.	2014

84	Seaport cluster labour cost reduction – A modelling approach	Tijan, E., Aksentijević, S., and Hlača, B.	2014
85	Simulation of administrative labour costs in seaport clusters	Tijan, E., Aksentijević, S., and Hlača, B.	2014
86	Conceptualizing seaports firms and functions as operational and institutional interrelations: The Gov-Ad-Man approach	Ibrahimi, K.	2014
87	Maritime policy in the North Sea region: Application of the cluster approach	Flitsch, V., Herz, N., Wolff, J., and Baird, A.J.	2014
88	Evolution of inland container distribution among the cluster of ports in the greater pearl river delta	Wang, A., Lai, S., and Mohmand, Y.T.	2014
89	An intermodal analysis of major seaports in Southern China	Guo, S. and Tang, L.C.	2014
90	Methods for strategic liner shipping network design	Mulder, J. and Dekker, R.	2014
91	The role of clusters in global maritime value	Hammervoll, T., Halse, L.L., and Engelseth, P.	2014
92	Conquering Japan	Van Den Hanenberg, G.	2014
93	Globalization and the Development of Industrial Clusters: Comparing Two Norwegian Clusters, 1900-2010	Amdam, R.P. and Bjarnar, O.	2015
94	Cooperation and the emergence of maritime clusters in the Atlantic: Analysis and implications of innovation and human capital for blue growth	Pinto, H., Cruz, A.R., and Combe, C.	2015
95	Measuring the maritime economy: Spain in the European Atlantic Arc	Fernández-Macho, J., Murillas, A., Ansuategi, A., (...), Prellezo, R., and Virto, J.	2015
96	On seaport development and reform and their institutional determinants: A new theoretical approach	Ibrahimi, K.	2015
97	Economic Integration Development of Port Cluster and Port City	Wang, L. and Liu, D.	2015
98	Research on the sources of efficiency and implementation of transport logistics clusters	Postan, M. and Stolyarov, G.	2015
99	Dynamic regional port cluster development: case of the ports across Taiwan Strait	Bai, X. and Lam, J.S.L.	2015
100	The Revealed Competitiveness of Major Ports in the East Asian Region: An Additive Market Share Analysis	Kim, T.S.	2015
101	Features of the maritime clusters of the Atlantic arc	Ferreira, A.M., Soares, C.G. and Salvador, R.	2015
102	Italian maritime cluster and Genoa university: A collaborative partnership for the education	Figari, M., Bonvino, C.P., Damilano, G., and Gnecco, A.	2015
103	Multipliers, linkages and influence fields among the sectors of the Portuguese maritime cluster	Simões, A., Soares, C.G., and Salvador, R.	2015
104	Participative approaches to the Portuguese maritime cluster	Salvador, R., Simões, A., and Soares, C.G.	2015
105	Big data for the Norwegian maritime industry	Wang, H., Karlsen, A., and Engelseth, P.	2015
106	The Role of knowledge-intensive service activities on inducing innovation in co-opetition strategies: Lessons from the maritime cluster of the Algarve region	Monteiro, P.V.	2016
107	The impact of the Panama Canal expansion on Panama's maritime cluster	Pagano, A., Wang, G., Sánchez, O., Ungo, R., and Tapiero, E.	2016
108	Editorial Port Management Studies: Selected papers from the Conference of International Association of Maritime Economists Theme: "the Role of Maritime Clusters and Innovation in Shaping Future Global Trade" August 24-26, 2015	Dooms, M. and Parola, F.	2016

109	Measuring relatedness in a multisectoral cluster: an input–output approach	Morrissey, K. and Cummins, V.	2016
110	The strategic factors shaping competitiveness for maritime clusters	Stavroulakis, P.J. and Papadimitriou, S.	2016
111	Québec' coastal maritime cluster: Its impact on regional economic development, 2001-2011	Doloreux, D., Shearmur, R., and Figueiredo, D.	2016
112	Port choice strategies for container carriers in China: A case study of the Bohai Bay Rim port cluster	Yang, J., Wang, G.W.Y., and Li, K.X.	2016
113	Spatial structure of container port systems across the Taiwan Straits under the direct shipping policy: A complex network system approach	Wang, L. and Hong, Y.	2016
114	Port supply chain integration: analyzing biofuel supply chains	Stevens, L.C.E. and Vis, I.F.A.	2016
115	The impact of the 2008 financial crisis on the Portuguese maritime cluster	Simões, A., Salvador, R., and Guedes Soares, C.	2016
116	Big data and industrial Internet of Things for the maritime industry in North-western Norway	Wang, H., Osen, O.L., Li, G., (...), Dai, H.-N., and Zeng, W.	2016
117	The economic features, internal structure and strategy of the emerging Portuguese maritime cluster	Salvador, R., Simões, A., and Guedes Soares, C.	2016
118	The Dutch maritime cluster monitor 2016	[No author name available]	2016